

Amendments to the Claims

This listing of claims will replace all prior version, and listings, of claims in the application.

Listing of Claims:

1. – 2. (canceled)

3. (currently amended) A method performed in a communications network, said communications network comprising nodes, at least one of said nodes transmitting a data frame on said network, ~~a first one of said nodes generating a control signal and transmitting said control signal on said network to at least a second one of said nodes during a transmission of said data frame on said network;~~ said method comprising:

~~generating a control signal by a first one of said nodes;~~

~~inserting and transmitting said control signal on said network to at least a second one of said nodes during a transmission of said data frame on said network, wherein said control signal is prioritized to be inserted before any other queued data or control codes;~~

receiving, by said second one of said nodes, said control signal after receiving only a portion of said data frame, wherein said control signal was inserted in said data frame outside of a payload field of said data frame; and

performing, by said second one of said nodes, an action required by said control signal prior to waiting until data frame has been fully received.

4. (original) The method of Claim 3 wherein said transmitting said control signal comprises transmitting a master clock signal, said method further comprising:

generating local clock signals by a local clock in said second one of said nodes, wherein

said performing an action comprises:

correcting any timing error in said local clock based on the time that said master clock signal was received by said second node after receiving only a portion of said data frame so that timing jitter is limited to less than a data frame period.

5. (original) The method of Claim 4 wherein said master clock signal is an 8KHz clock.

6. (original) The method of Claim 5 wherein said 8KHz clock is a Global Positioning System (GPS) clock.

7. (original) The method of Claim 3 wherein said data frame is transmitted in accordance with an Ethernet protocol.

8. (original) The method of Claim 3 wherein said control signal is an 8B/10B encoded control character.

9. (original) The method of Claim 3 wherein said data frame is a packet.

10. (original) The method of Claim 3 wherein said control signal is a master clock signal.

11. (original) The method of Claim 3 wherein said performing an action comprises performing in action by media access controller (MAC).

12. (original) The method of Claim 3 wherein said control signal is a master clock signal, and wherein said performing an action comprises taking steps to correct a timing error between a local clock in said second one of said nodes and said master clock signal.

13. (currently amended) A method performed in a communications network, said communications network comprising nodes, at least one of said nodes transmitting a data frame on said network, a first one of said nodes generating a control signal and transmitting said control signal on said network to at least a second one of said nodes during a transmission of said data frame on said network, said method comprising:

receiving, by said second one of said nodes, said control signal after receiving only a portion of said data frame; and

performing, by said second one of said nodes, an action required by said control signal prior to waiting until said data frame has been fully received,

wherein said control signal is a master clock signal, and wherein said performing an action comprises taking steps to correct a timing error between a local clock in said second one of said nodes and said master clock signal, wherein said local clock outputs signals at 125 MHz.

14. (currently amended) A method performed in a communications network, said communications network comprising nodes, at least one of said nodes transmitting a data frame on said network, a first one of said nodes generating a control signal and transmitting said control signal on said network to at least a second one of said nodes during a transmission of said data frame on said network, said method comprising:

receiving, by said second one of said nodes, said control signal after receiving only a portion of said data frame; and

performing, by said second one of said nodes, an action required by said control signal prior to waiting until said data frame has been fully received,

wherein said control signal is a master clock signal, and wherein said performing an action comprises taking steps to correct a timing error between a local clock in said second one of said nodes and said master clock signal, wherein said control signal is an 8B/10B encoded character, and wherein said timing error is corrected so that a clock jitter in said second one of said nodes is approximately the period of said 8B/10B encoded character.

15. (original) The method of Claim 3 wherein said performing an action comprise synchronizing a local clock in said second one of said nodes with said control signal.

16. – 18. (canceled)

19. – 21. (withdrawn)

22. (currently amended) A method performed in a communications network, said communications network comprising nodes, at least one of said nodes transmitting a data frame on said network, ~~a first one of said nodes generating a control signal and transmitting said control signal on said network to at least a second one of said nodes during a transmission of said data frame on said network~~, said method comprising:

generating a control signal by a first one of said nodes;

inserting and transmitting said control signal on said network to at least a second one of said nodes during a transmission of said data frame on said network, wherein said control signal is prioritized to be inserted before any other queued data or control codes;

receiving, by said ~~second~~ one of said nodes, said control signal after receiving only a portion of said data frame; and

performing, by said second one of said nodes, an action required by said control signal prior to waiting until said data frame has been fully received,

wherein said control signal is a master clock signal, and wherein said performing an action comprises taking steps to correct a timing error between a local clock in said second one of said nodes and said master clock signal,

wherein said control signal is a MAC layer encoded character, and wherein said timing error is corrected so that a clock jitter in said second one of said nodes is approximately the period of said MAC layer encoded character.